

Amendments to the Claims:

Please cancel Claims 1 – 40 and 49 – 52 as indicated in the following listing of claims, which replaces all prior versions and listings of claims in the application.

Listing of Claims:

41. (Original) A plasma torch head comprising:
an outer nozzle;
an inner nozzle, the inner nozzle including a conduit passing through the inner nozzle from an inlet side toward an outlet,
a toroidal transformer core surrounding the conduit; and
a bypass providing a return path for a secondary plasma current circuit around the toroidal transformer core.

42. (Original) The plasma torch head of claim 41 wherein the inner nozzle comprises metal and further including a dielectric spacer in the inner nozzle to prevent an electric path through the inner nozzle around the toroidal transformer core.

43. (Original) The plasma torch head of claim 41 wherein a first gas is flown through the conduit and a second gas is flown through the bypass, the first gas being different from the second gas.

44. (Original) The plasma torch head of claim 43 wherein the first gas is oxygen and the second gas is either propane or hydrogen.

45. (Original) The plasma torch head of claim 41 further comprising a primary coil disposed to couple electro-magnetic energy to the toroidal transformer core wherein the primary coil and the toroidal transformer core are enclosed within the inner nozzle.

46. (Original) A method of cutting material using a plasma torch, the method comprising:
 flowing a plasma precursor in a conduit through a center of a toroidal transformer core of a plasma generator in an inner nozzle of a plasma torch;
 forming plasma from the plasma precursor;
 completing a plasma current secondary circuit around the toroidal transformer core through a bypass; and
 transporting plasma out an outlet of the plasma torch.

47. (Original) The method of claim 46 further comprising flowing carrier gas through the bypass.

48. (Original) The method of claim 46 wherein the forming plasma step includes providing a primary voltage to a primary coil coupling electro-magnetic energy to the toroidal transformer core, the primary voltage being an alternating-current voltage less than about 115 Volts.